T092h0" 5512h860

FIG. 1A

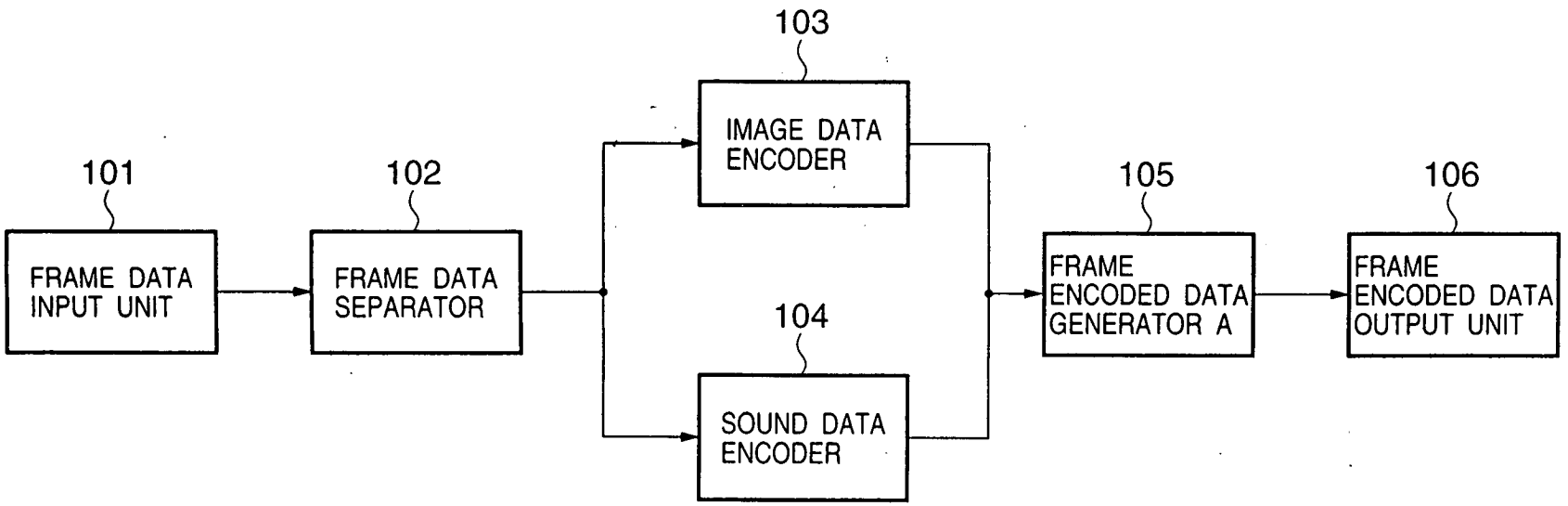


FIG. 1B

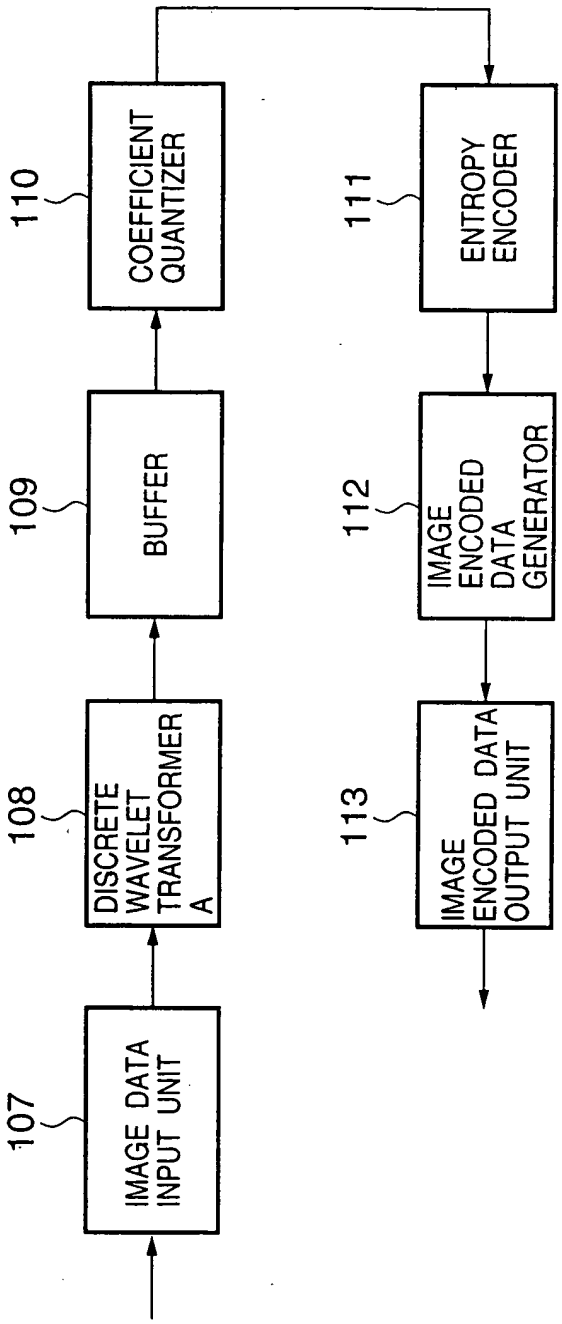
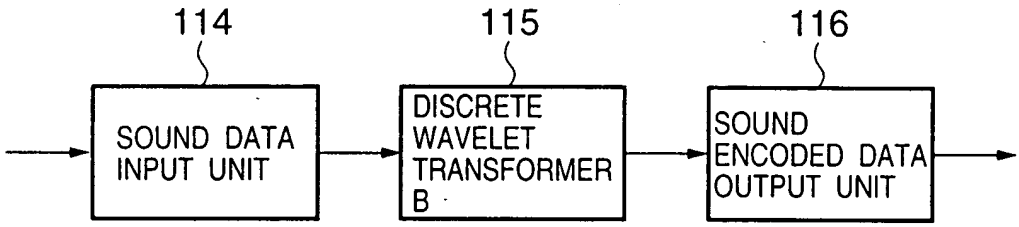
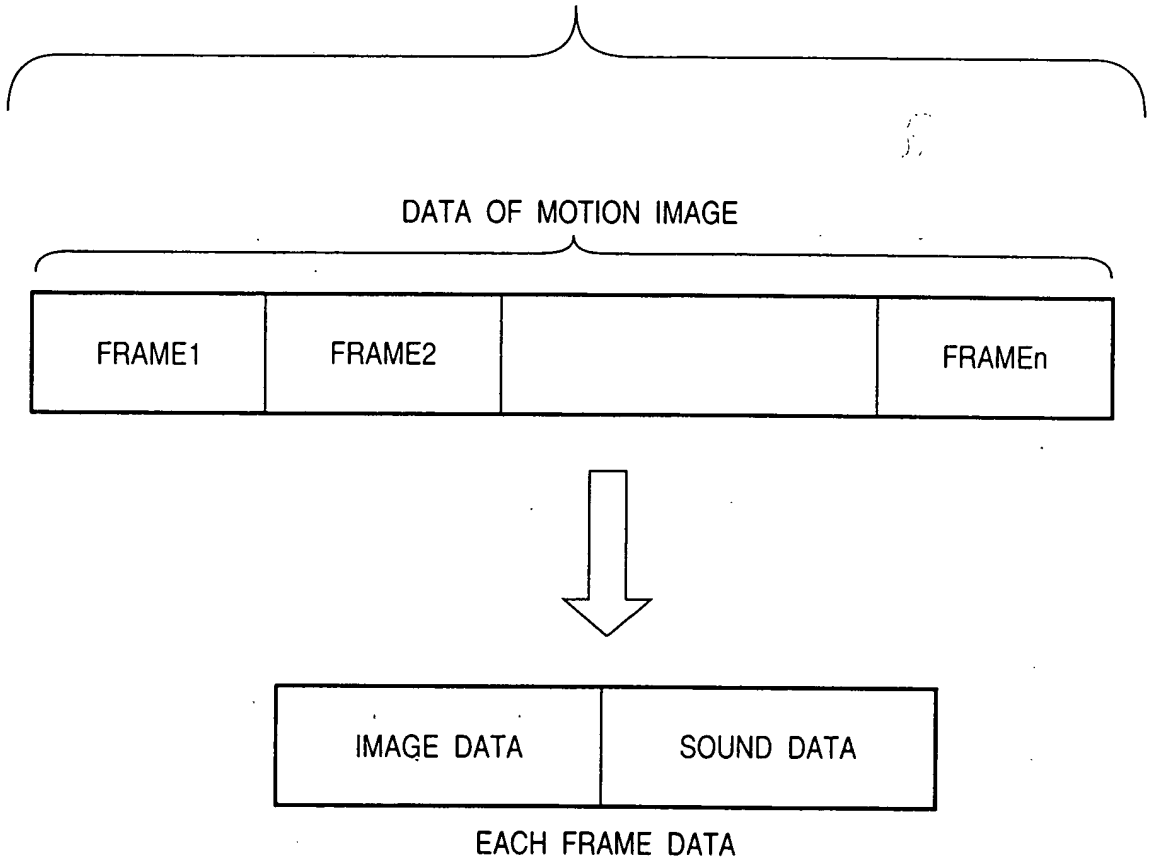

107
IMAGE DATA INPUT UNIT
108
DISCRETE WAVELET TRANSFORMER A
109
BUFFER
110
COEFFICIENT QUANTIZER
111
ENTROPY ENCODER
112
IMAGE ENCODED DATA GENERATOR
113
IMAGE ENCODED DATA OUTPUT UNIT

FIG. 1C



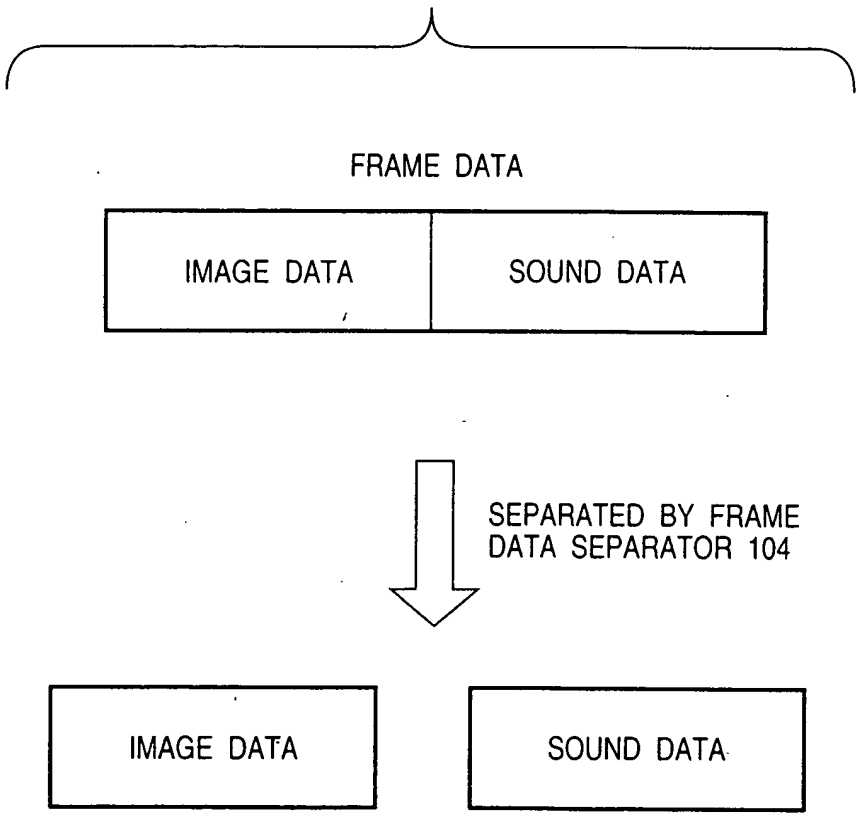
EP 0 954 855 B1

FIG. 2



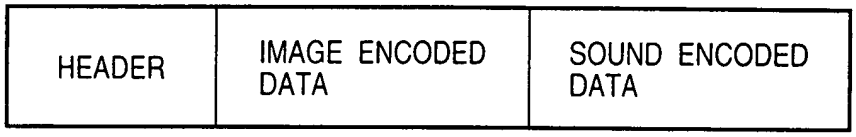
EP 0 924 855 A2 19990623

FIG. 3



EP 0 924 951 A2

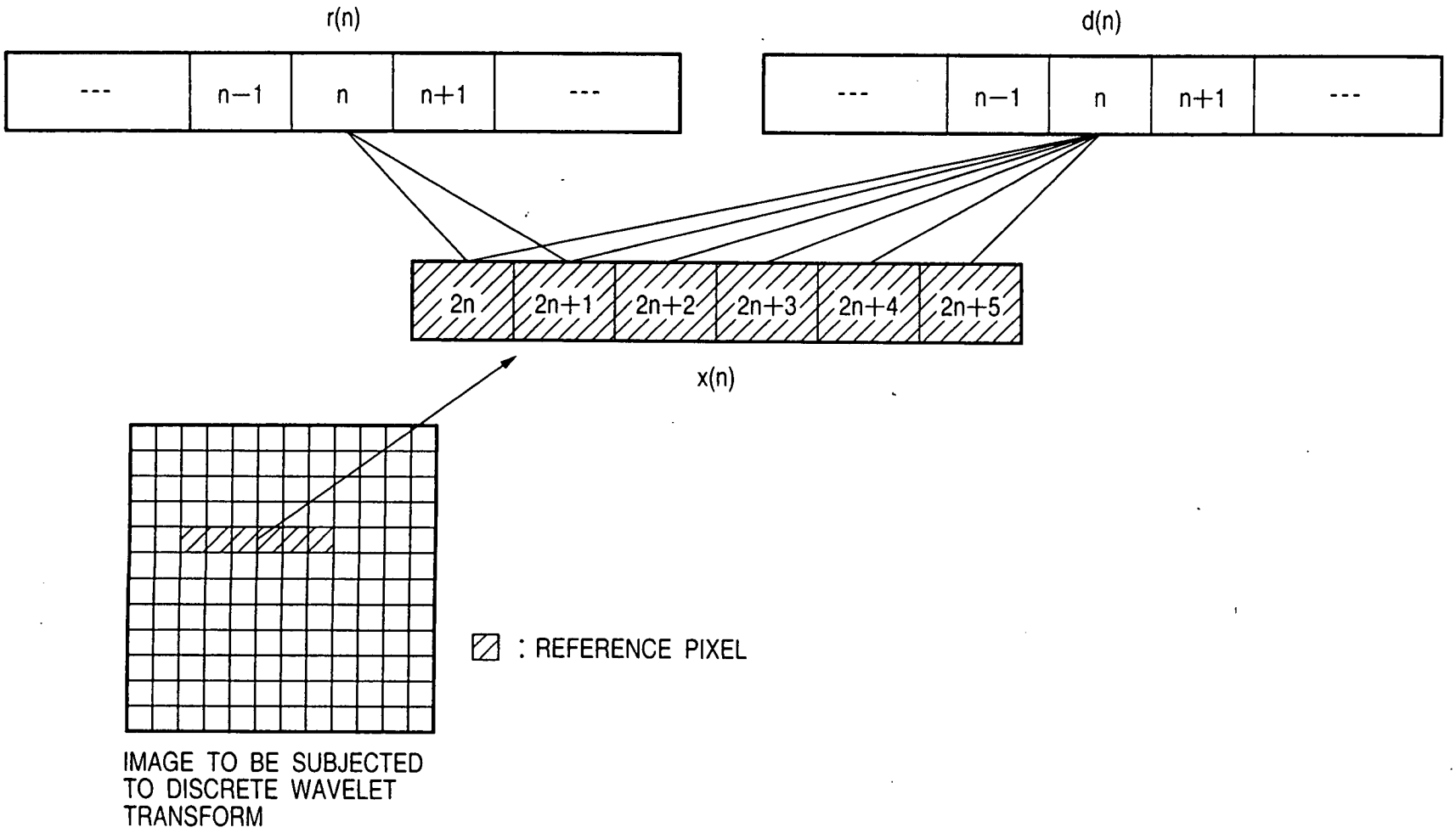
FIG. 4



FRAME ENCODED DATA

EP 0 924 934 A1

FIG. 5


r(n)
d(n)
---
n−1
n
n+1

---
n−1
n
n+1

2n
2n+1
2n+2
2n+3
2n+4
2n+5
x(n)
: REFERENCE PIXEL
IMAGE TO BE SUBJECTED TO DISCRETE WAVELET TRANSFORM

T092h0" SST2h860

FIG. 6A

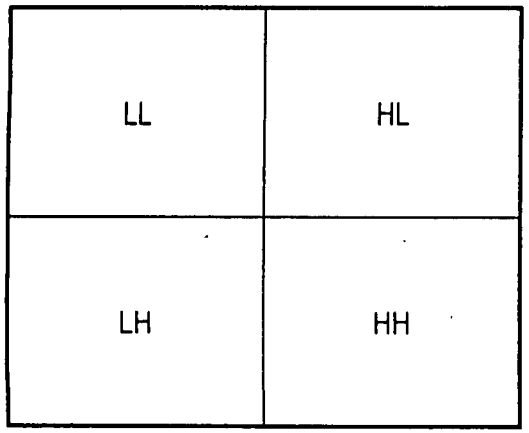


FIG. 6B

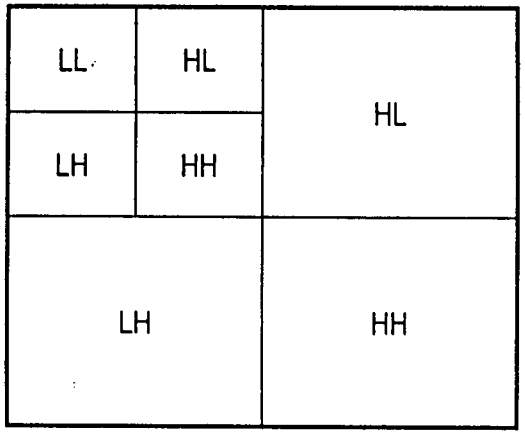
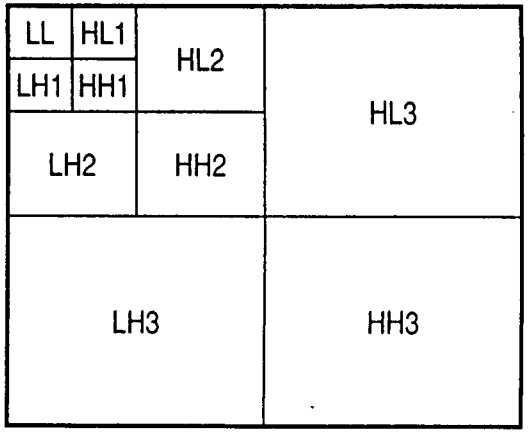


FIG. 6C



LEVEL0 : LL
LEVEL1 : HL1,HH1,LH1
LEVEL2 : HL2,HH2,LH2
LEVEL3 : HL3,HH3,LH3

FIG. 7

FREQUENCY COMPONENT	QUANTIZATION STEP
LL	1
HL1	2
HH1	2
LH1	2
HL2	4
HH2	4
LH2	4
HL3	8
HH3	8
LH3	8

EP 0 762 764 A2

FIG. 8

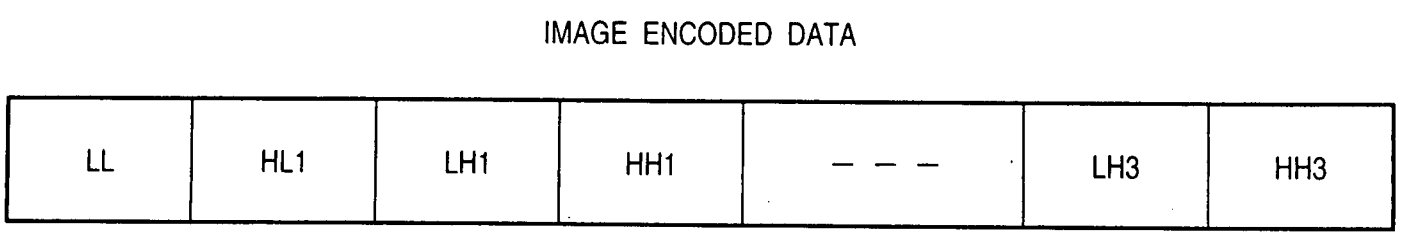
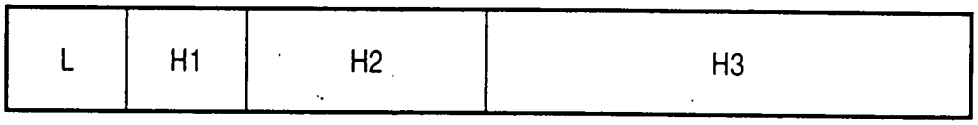


FIG. 9A

FIG. 9B

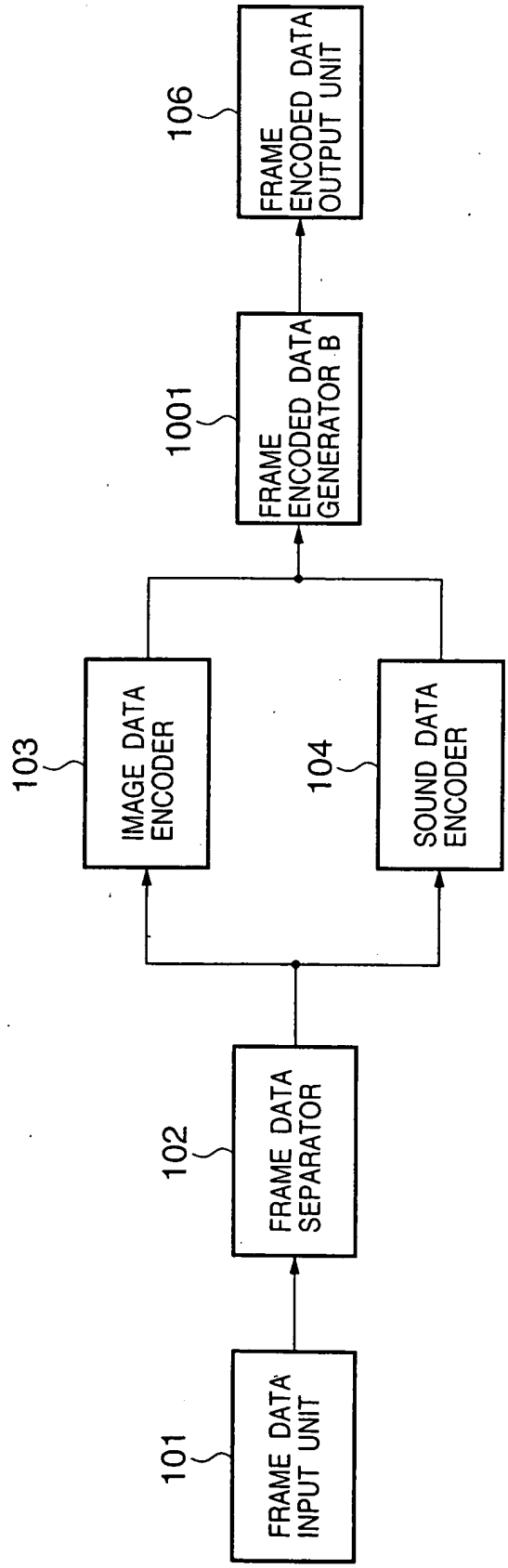
FIG. 9C



LEVEL0 : L LEVEL1 : H1 LEVEL2 : H2 LEVEL3 : H3

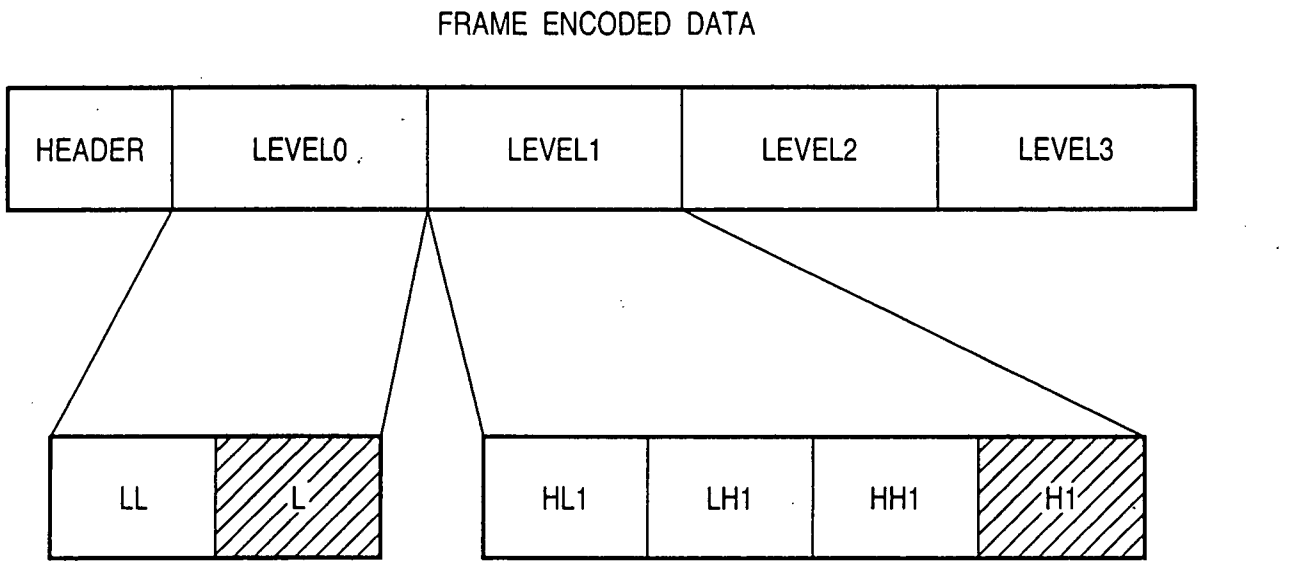
EP0924860A2 : 1999-06-23

FIG. 10


101
FRAME DATA INPUT UNIT
102
FRAME DATA SEPARATOR
103
IMAGE DATA ENCODER
104
SOUND DATA ENCODER
1001
FRAME ENCODED DATA GENERATOR B
106
FRAME ENCODED DATA OUTPUT UNIT

T092h0' 55T2h860

FIG. 11



WHITE SUBBAND : SUBBAND OF IMAGE ENCODED DATA
HATCHED SUBBAND : SUBBAND OF SOUND ENCODED DATA

CONFIGURATIONS OF LEVELS 2 AND 3 ARE IDENTICAL WITH LEVELS 1

FIG. 12

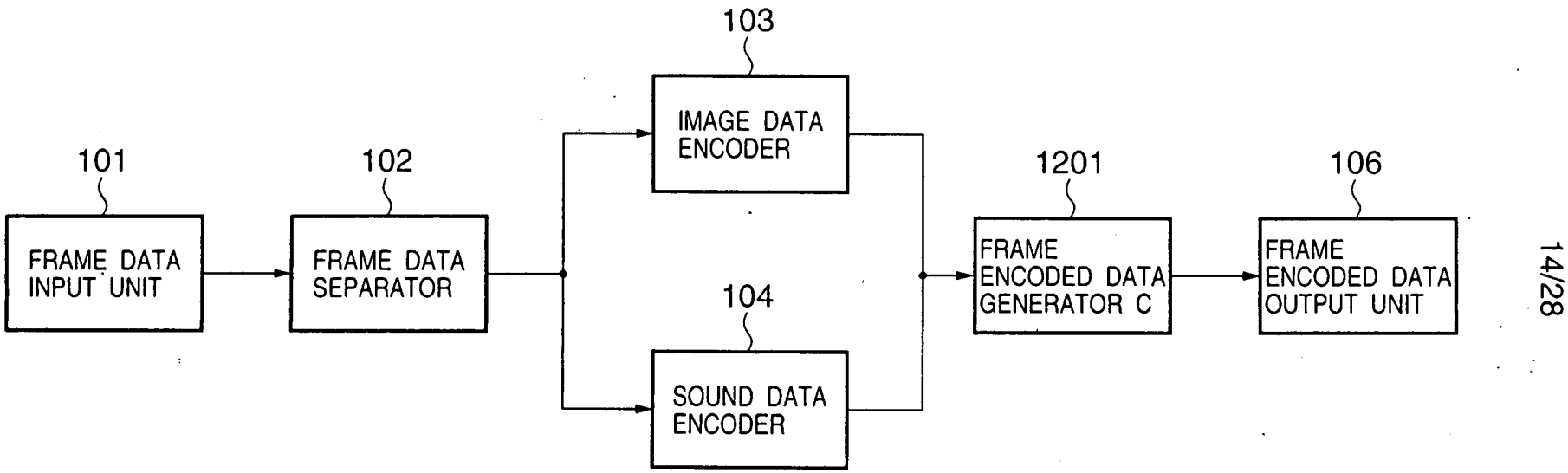
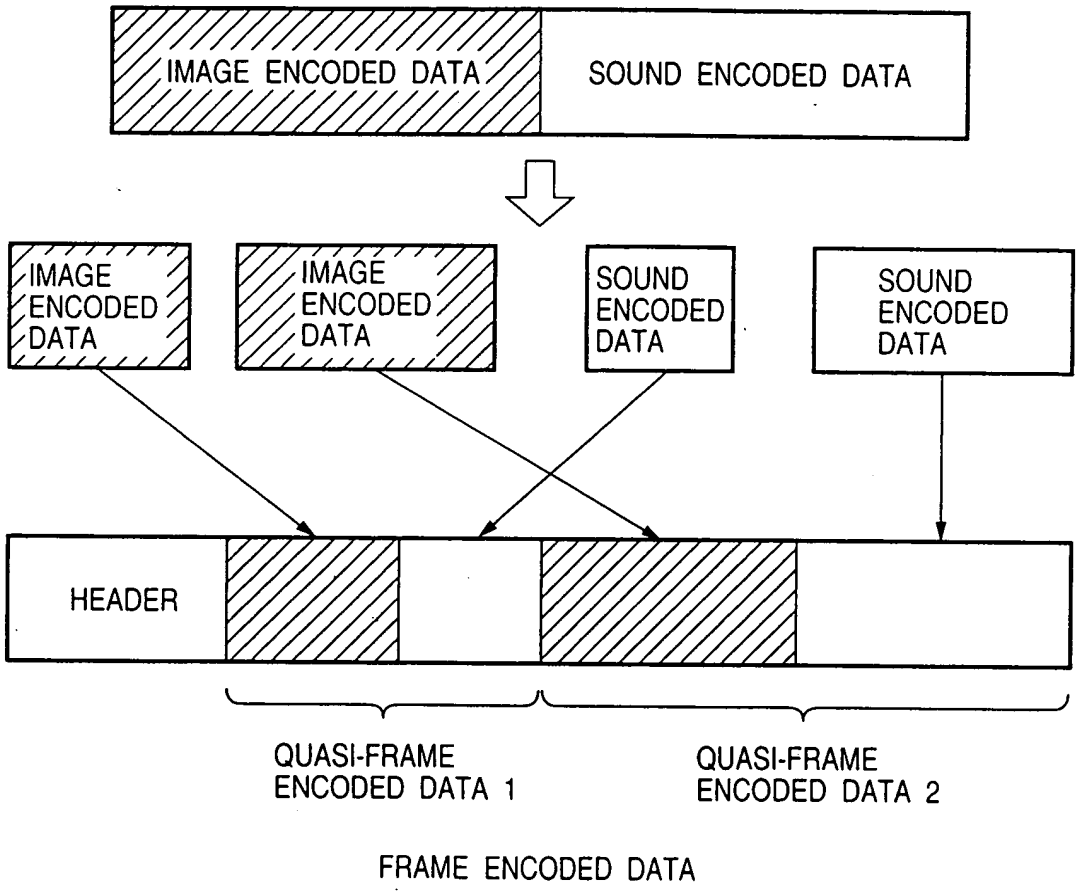
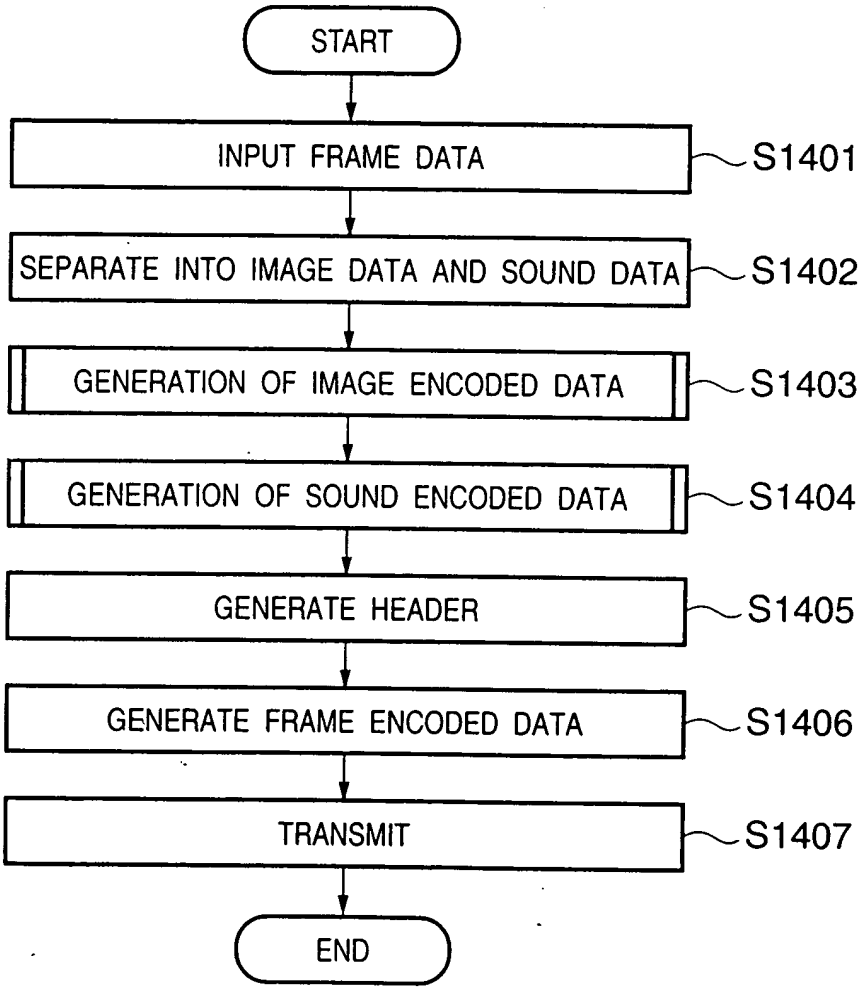

101
FRAME DATA INPUT UNIT
102
FRAME DATA SEPARATOR
103
IMAGE DATA ENCODER
104
SOUND DATA ENCODER
1201
FRAME ENCODED DATA GENERATOR C
106
FRAME ENCODED DATA OUTPUT UNIT

FIG. 13



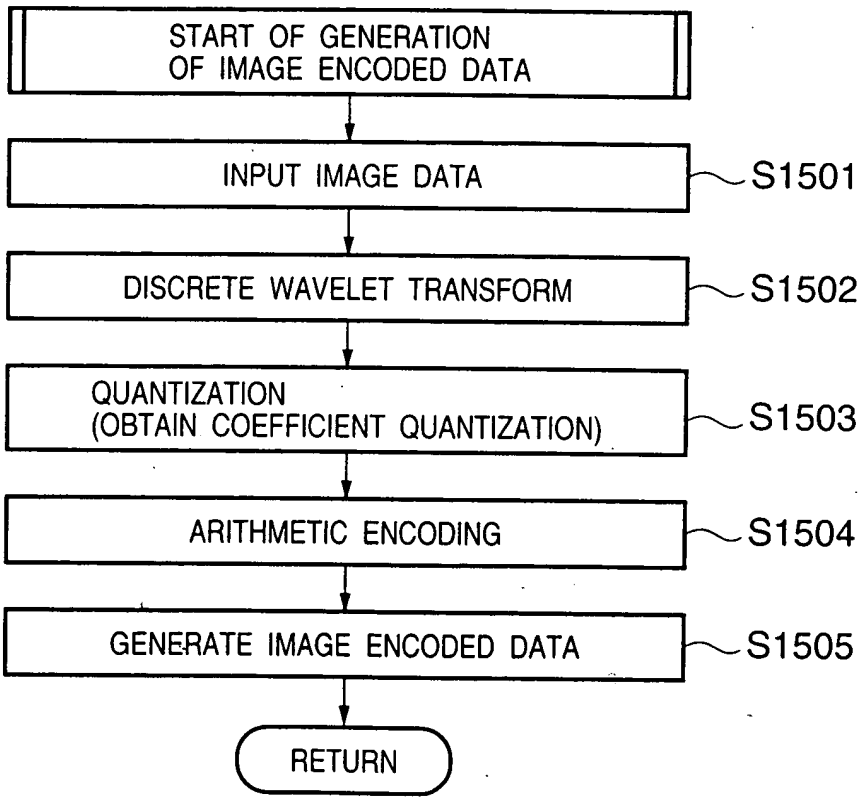
EP 0 924 959 A1

FIG. 14



EP 0 984 625 A1

FIG. 15



EP0924655A2

EP 0 954 955 B1

FIG. 16

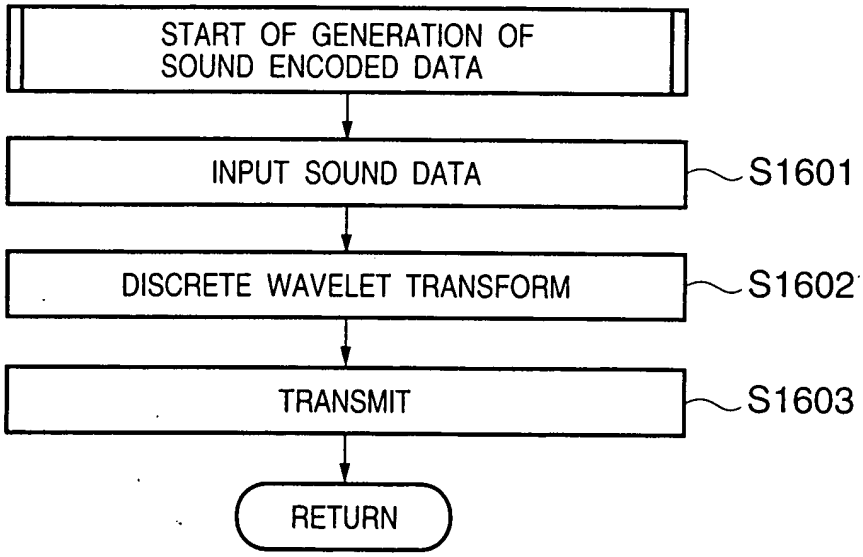


FIG. 17

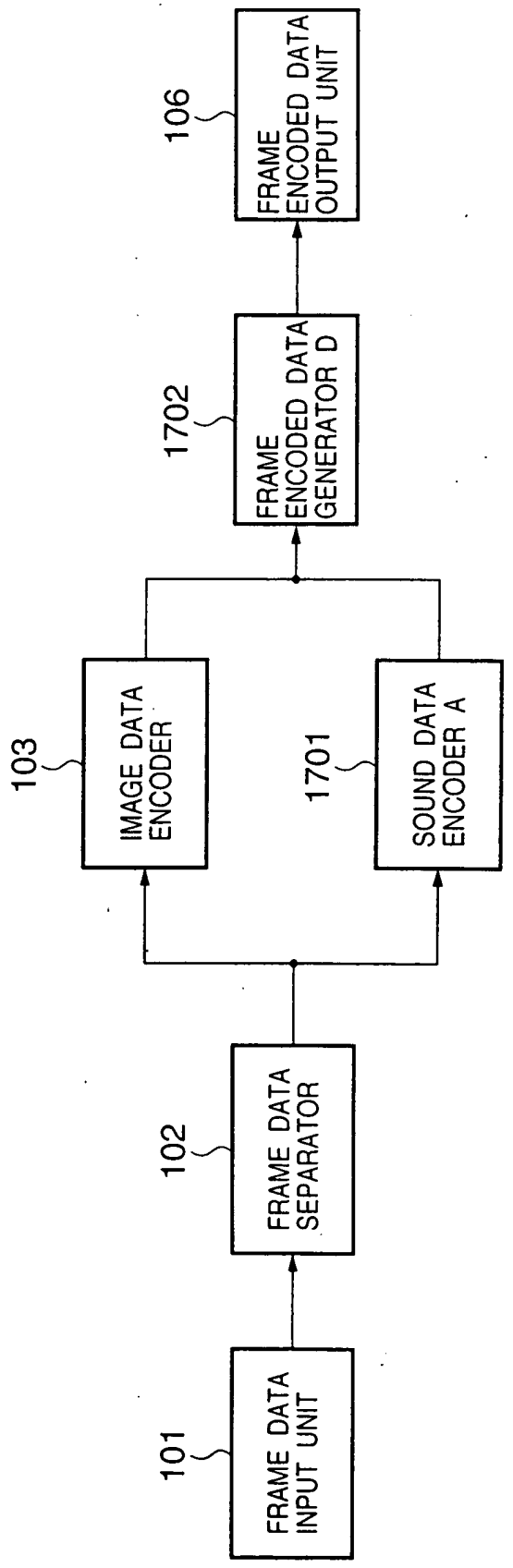

101
FRAME DATA INPUT UNIT
102
FRAME DATA SEPARATOR
103
IMAGE DATA ENCODER
1701
SOUND DATA ENCODER A
1702
FRAME ENCODED DATA GENERATOR D
106
FRAME ENCODED DATA OUTPUT UNIT

FIG. 18

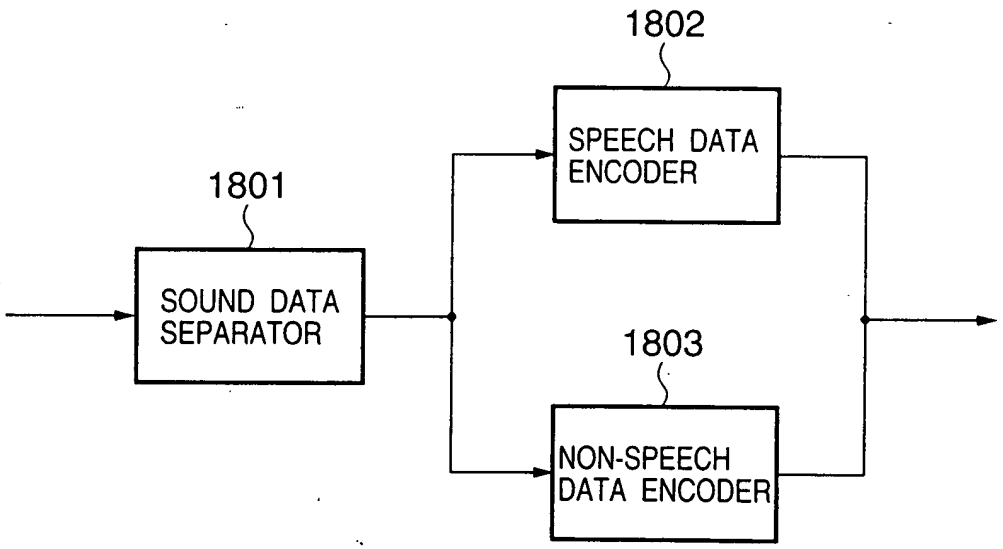

1802
SPEECH DATA ENCODER
1801
SOUND DATA SEPARATOR
1803
NON-SPEECH DATA ENCODER

FIG. 19

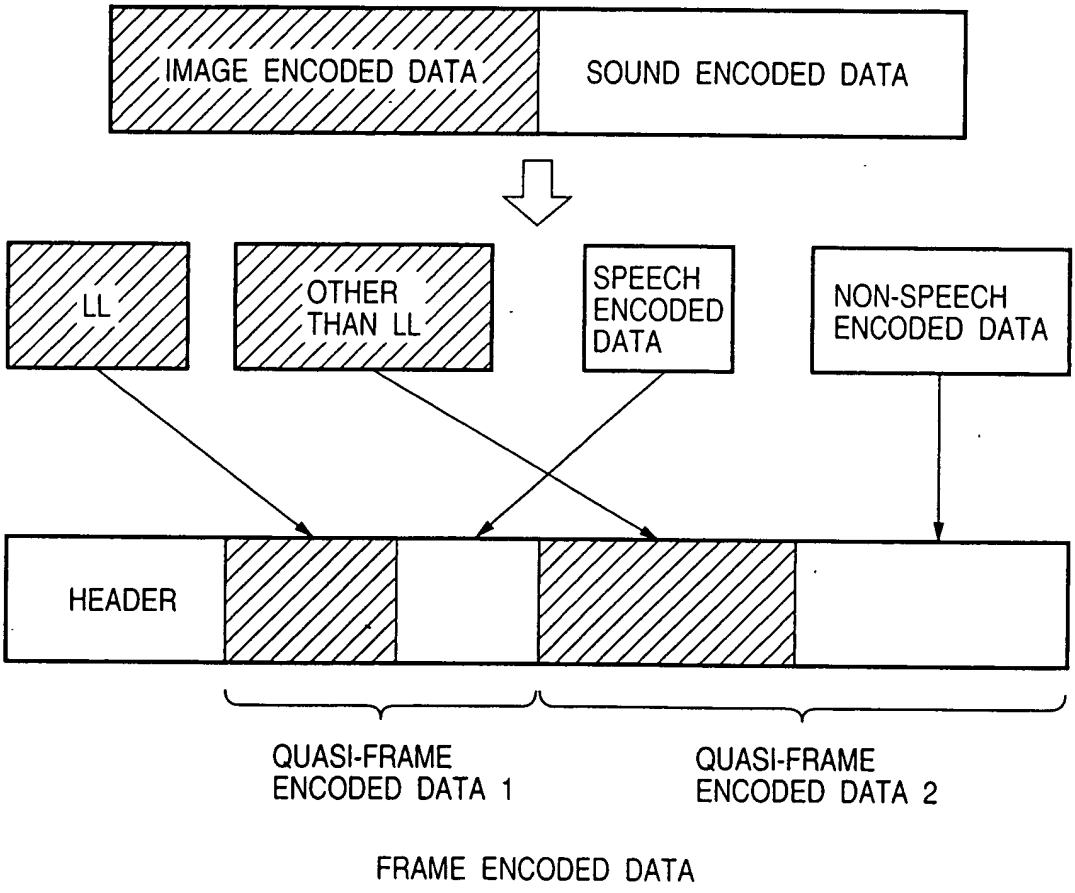


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FIG. 20

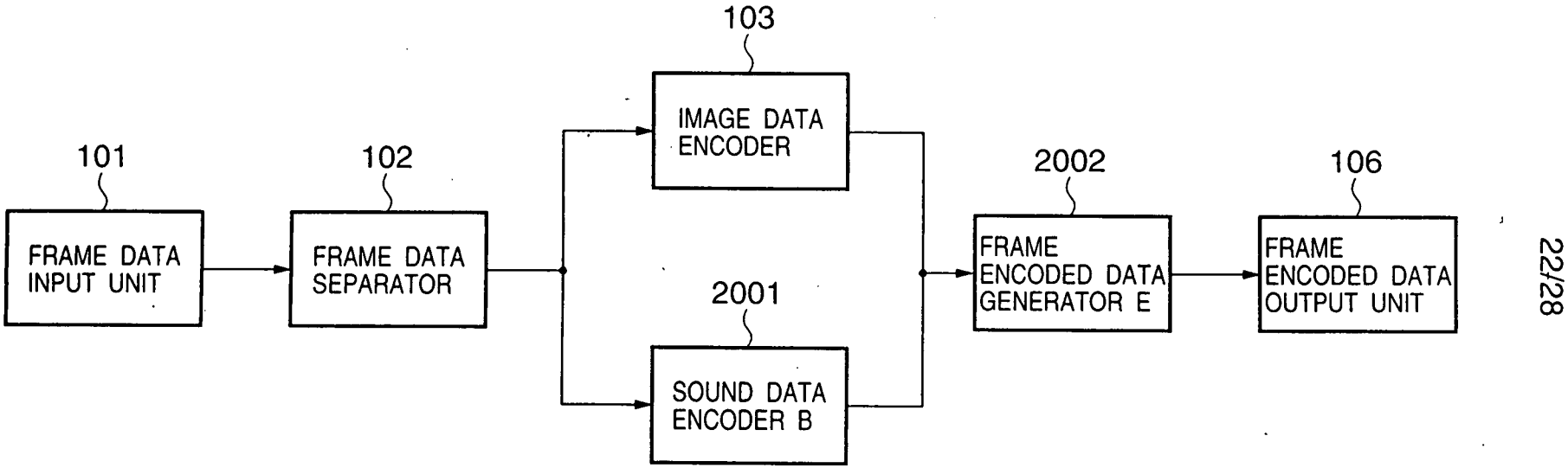
103
IMAGE DATA ENCODER
101
102
2002
106
FRAME DATA INPUT UNIT
FRAME DATA SEPARATOR
FRAME ENCODED DATA GENERATOR E
FRAME ENCODED DATA OUTPUT UNIT
2001
SOUND DATA ENCODER B

FIG. 21

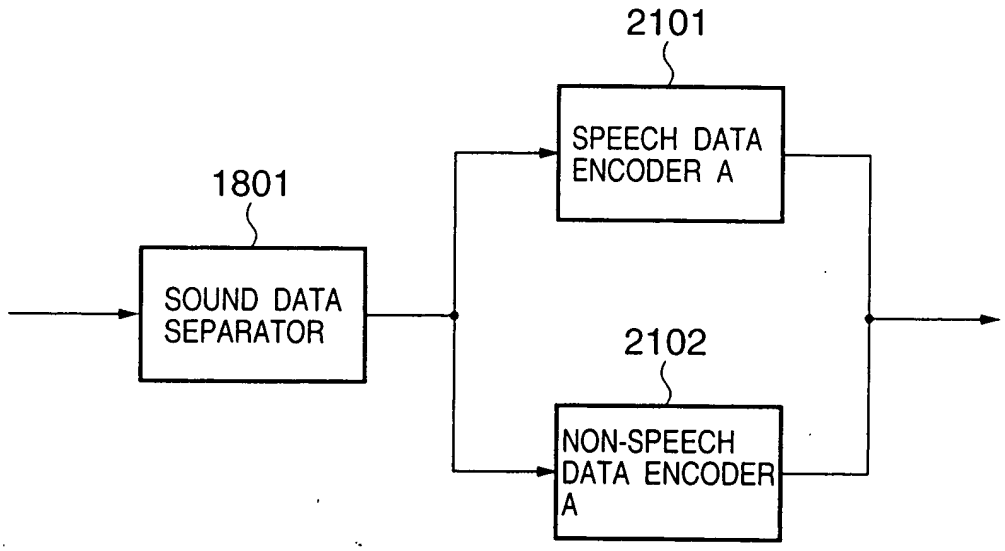
2101
SPEECH DATA ENCODER A
1801
SOUND DATA SEPARATOR
2102
NON-SPEECH DATA ENCODER A

FIG. 22

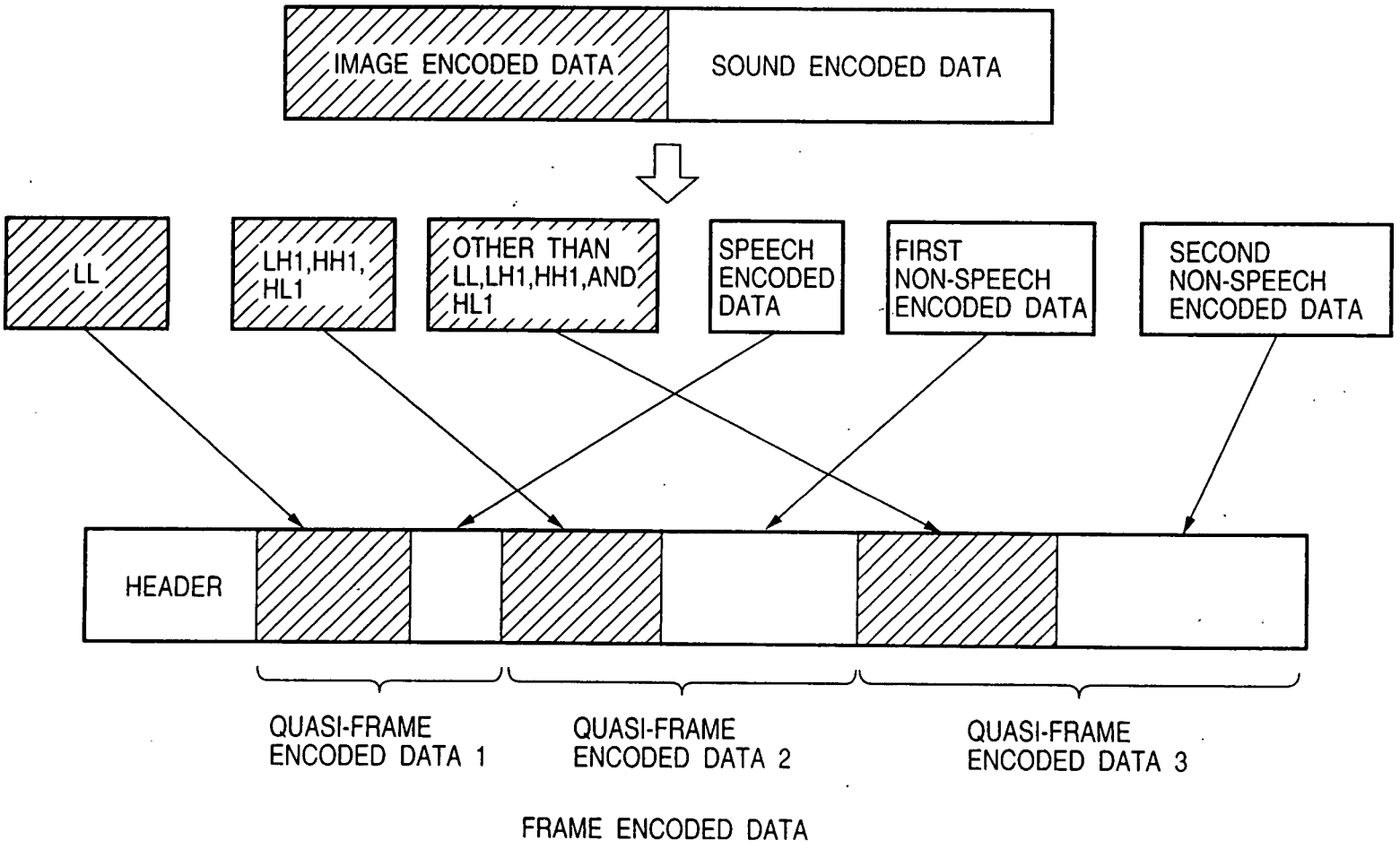
IMAGE ENCODED DATA
SOUND ENCODED DATA
LL
LH1,HH1,
HL1
OTHER THAN
LL,LH1,HH1,AND
HL1
SPEECH
ENCODED
DATA
FIRST
NON-SPEECH
ENCODED DATA
SECOND
NON-SPEECH
ENCODED DATA
HEADER
QUASI-FRAME
ENCODED DATA 1
QUASI-FRAME
ENCODED DATA 2
QUASI-FRAME
ENCODED DATA 3
FRAME ENCODED DATA

FIG. 23

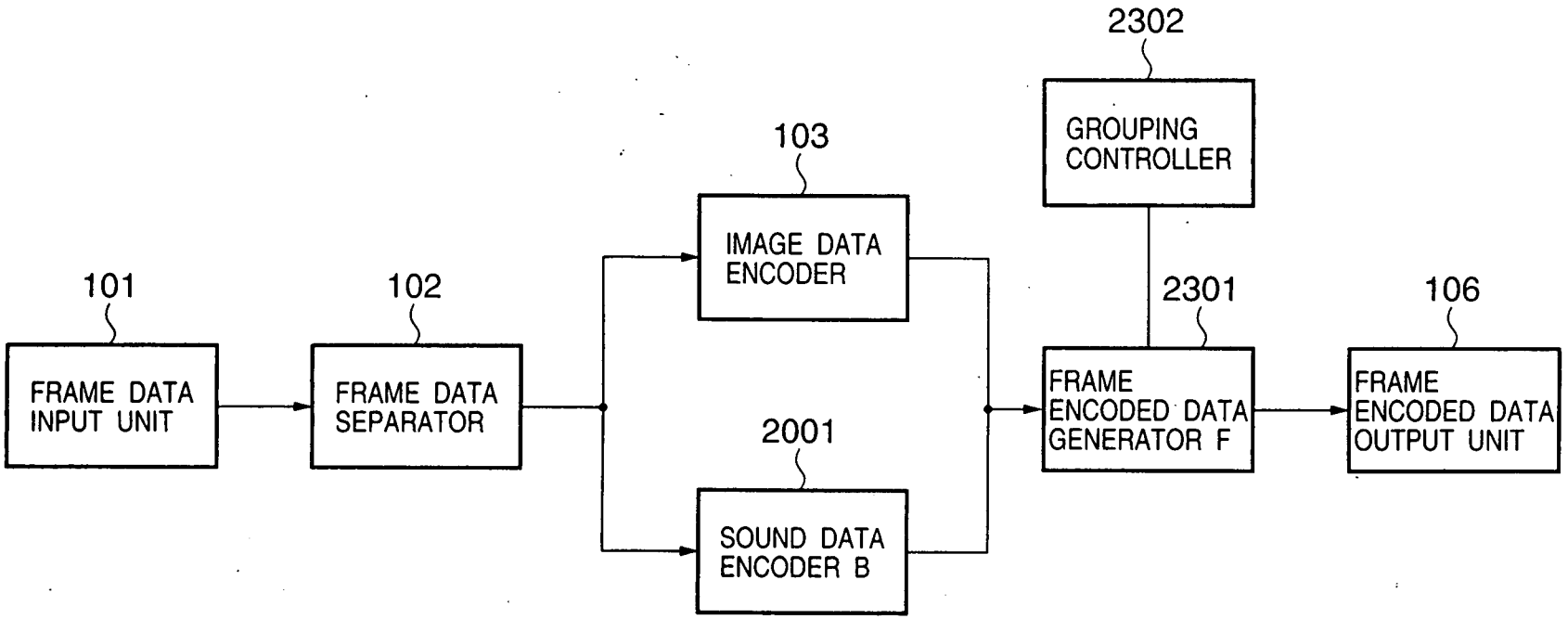
2302
GROUPING CONTROLLER
103
IMAGE DATA ENCODER
101
102
2301
106
FRAME DATA INPUT UNIT
FRAME DATA SEPARATOR
FRAME ENCODED DATA GENERATOR F
FRAME ENCODED DATA OUTPUT UNIT
2001
SOUND DATA ENCODER B

FIG. 24

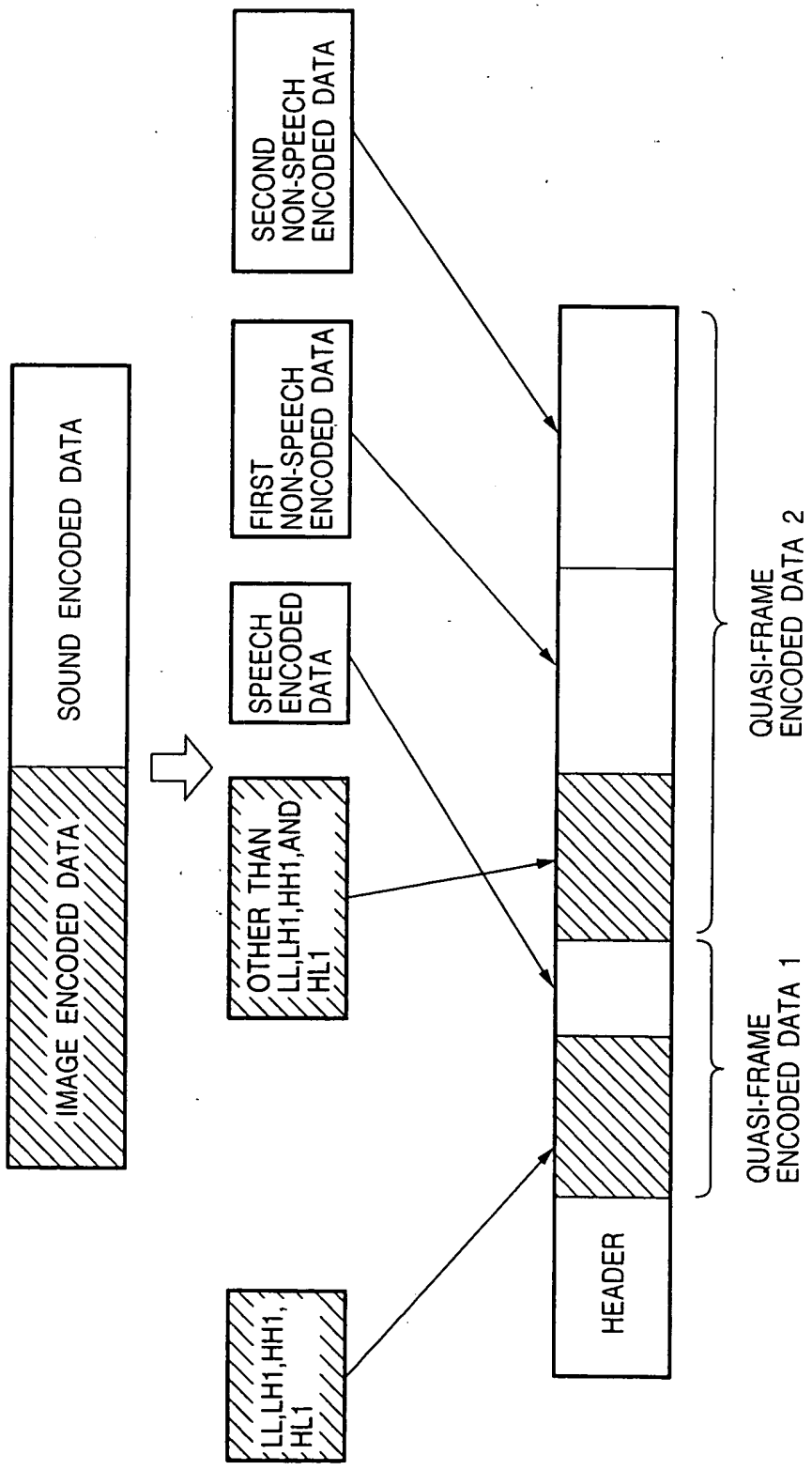
SOUND ENCODED DATA
IMAGE ENCODED DATA
SECOND NON-SPEECH ENCODED DATA
FIRST NON-SPEECH ENCODED DATA
SPEECH ENCODED DATA
OTHER THAN LL,LH1,HH1,AND HL1
LL,LH1,HH1, HL1
HEADER
QUASI-FRAME ENCODED DATA 1
QUASI-FRAME ENCODED DATA 2
FRAME ENCODED DATA

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FIG. 25

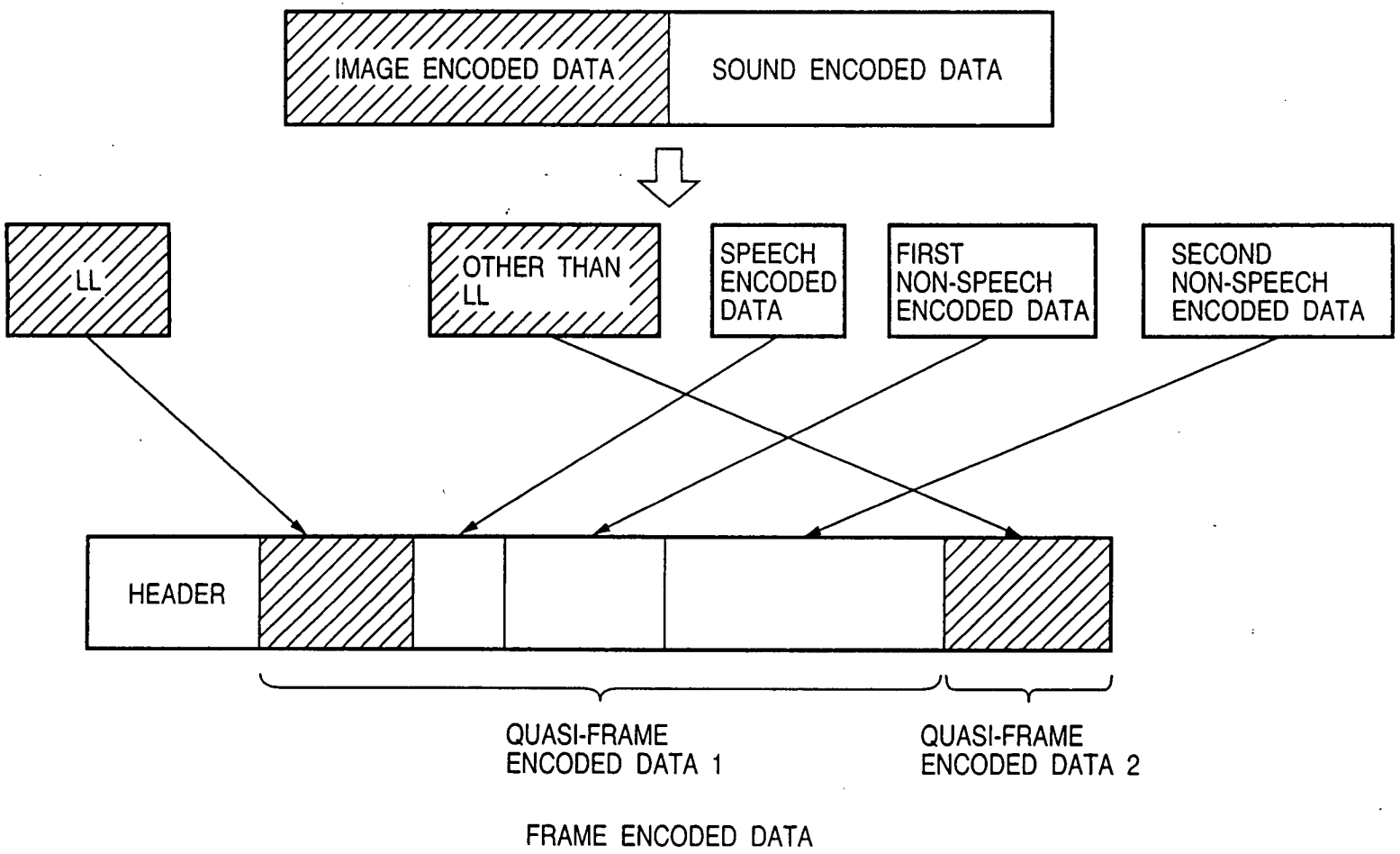
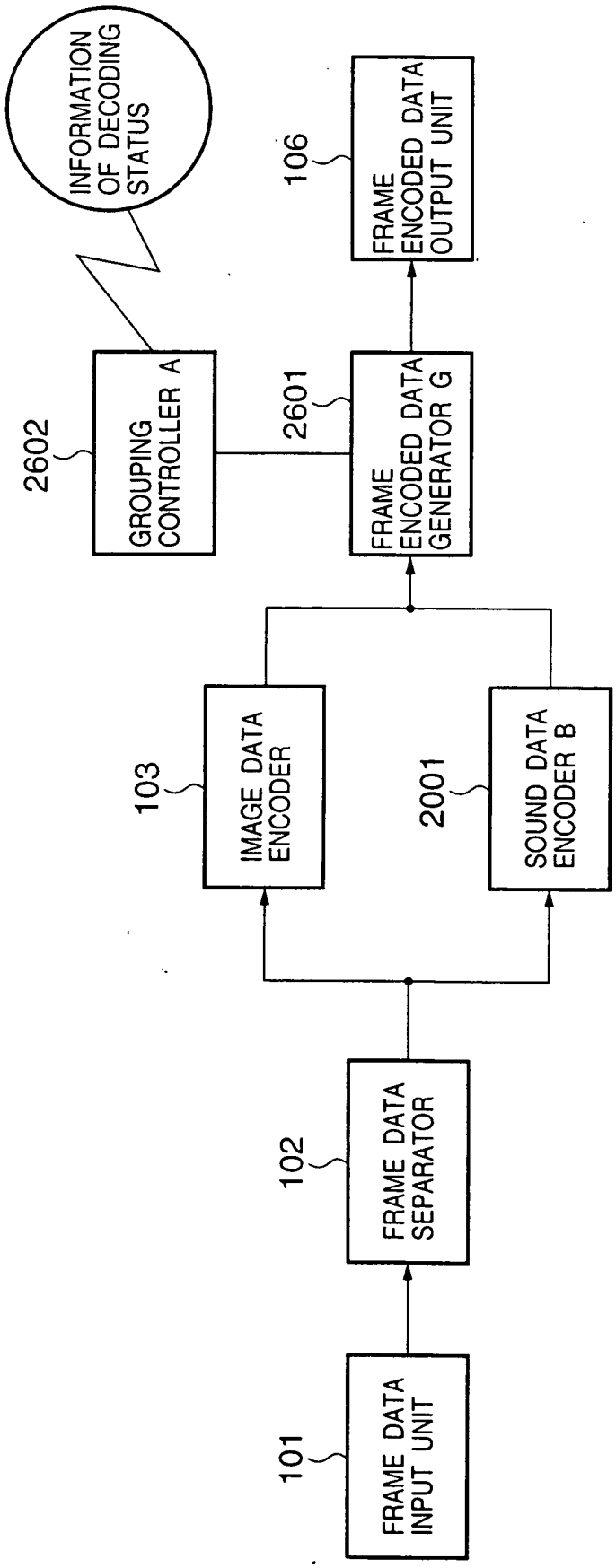


FIG. 26


INFORMATION OF DECODING STATUS
106
FRAME ENCODED DATA OUTPUT UNIT
2602
GROUPING CONTROLLER A
2601
FRAME ENCODED DATA GENERATOR G
103
IMAGE DATA ENCODER
2001
SOUND DATA ENCODER B
102
FRAME DATA SEPARATOR
101
FRAME DATA INPUT UNIT